What is claimed is:

1. A method for forming an optical blank, the method comprising:

providing a green body, the green body including a non-porous exterior portion and a porous interior portion;

evacuating the interior portion to thereby create a vacuum in the interior portion; and

pressing the green body using a hot isostatic pressing technique, whereby the green body is densified into a solid glass optical blank.

2. The method of claim 1, wherein the step of providing further comprises:

providing glass particles, the glass particles being a mixture of glass soot and ground glass cullet;

mixing the glass particles with water to form an aqueous suspension; and

slip-casting the aqueous suspension to thereby form the green body.

3. The method of claim 2, wherein the soot particles are formed as a by-product of a flame hydrolysis process.

4. The method of claim 2, wherein the aqueous suspension is a 70 weight percent glass particle suspension.

5. The method of claim 1, further comprising the step of cleaning the green body to remove impurities.

6. The method of claim 5, wherein the step of cleaning further comprises:

disposing the green body in a high temperature chlorine gas atmosphere, the high temperature being lower than a sintering temperature; and

treating the green body by allowing the chlorine gas to react with the impurities for a pre-determined time.

7. The method of claim 6, wherein the high temperature is between 700°C and 1100°C.

8. The method of claim 1, wherein the aqueous suspension includes an ammonia hydroxide dispersant.

9. The method of claim 1, wherein the step of evacuating further comprises:

fusing a stem onto the green body, the stem having a composition similar to the green body;

exposing the interior portion of the green body;

drawing a vacuum on the interior portion by evacuating the interior portion via the stem; and

hermetically sealing the green body.

10. The method of claim 1, wherein the step of providing further comprises:

providing glass particles, the glass particles being a mixture of glass soot and ground glass cullet;

mixing the glass particles with water to form an aqueous suspension;

pouring the aqueous suspension in a mold, the suspension being allowed to cast in the mold for a predetermined time, whereby a green body wall is formed;

removing the remaining aqueous suspension from the mold, whereby the interior portion is hollow;

drying the green body to form a vitreous container, the vitreous container having a volume capacity; and

filling the vitreous container with a glass powder having substantially the same material composition as the glass particles, a volume of the glass powder filling the vitreous container being substantially equal to the volume capacity of the vitreous container.

11. The method of claim 10, wherein the exterior portion is flame polished to substantially eliminate surface porosity.

12. The method of claim 10, wherein the aqueous suspension is a 70 weight percent glass particle suspension.

13. The method of claim 10, further comprising:

heating the vitreous container to render the vitreous container plastic, a temperature of the glass powder being raised to an appropriate compacting temperature;

applying external pressure to the vitreous container, the external pressure collapsing the vitreous container about the glass powder disposed within the vitreous container, the glass powder being fully densified, whereby a solid glass optical blank is formed; and

cooling the densified solid glass optical blank.

14. The method of claim 13, wherein the step of applying includes hot isostatic pressing the vitreous container at a temperature above the annealing point but below the softening point of the glass.

15. The method of claim 14, wherein the step of applying includes the step of raising the temperature above the melting temperature to thereby remove any solid inclusions.

16. The method of claim 1, wherein the step of providing further comprises:

providing glass particles, the glass particles being a mixture of glass soot and ground glass cullet;

mixing the glass particles with water to form an aqueous suspension;

pouring the aqueous suspension in a mold, the suspension being allowed to cast in the mold for a predetermined time to thereby form the green body; and

bisqueing the green body, whereby the interior portion is a porous solid.

17. The method of claim 16, wherein the exterior portion is flame polished to substantially eliminate surface porosity.

18. The method of claim 16, wherein the aqueous suspension is a 50-70 weight percent glass particle suspension.

19. The method of claim 16, further comprising:

heating the green body to render the green body container plastic, a temperature of the porous interior portion being raised to an appropriate compacting temperature;

applying external pressure to the green body, the external pressure collapsing the green body until the interior portion is fully densified, whereby a solid glass optical blank is formed; and

cooling the densified solid glass optical blank.

20. The method of claim 1, wherein the step of providing is performed using a plaster mold.

21. The method of claim 1, wherein the step of providing is performed using vacuum casting.

22. The method of claim 1, wherein the step of providing is performed using glass blowing.

23. A method for forming an optical blank, the method comprising:

providing a green body including a non-porous exterior portion, the green body being a vitreous container having a hollow interior enclosed by a porous interior wall, the hollow interior being characterized by a volume capacity;

filling the vitreous container with a glass powder, a volume of the glass powder filling the vitreous container being substantially equal to the volume capacity of the vitreous container;

evacuating the interior portion to thereby create a vacuum in the hollow interior;

heating the vitreous container to render the vitreous container plastic, a temperature of the glass powder being raised to an appropriate compacting temperature;

applying external pressure to the vitreous container, the external pressure collapsing the vitreous container about the glass powder disposed within the vitreous container, the glass powder being fully densified, whereby a solid glass optical blank is formed; and

cooling the densified solid glass optical blank.

24. A method for forming an optical blank, the method comprising:

providing a green body, the green body including a non-porous exterior portion and a porous interior portion, the interior portion being a porous solid;

evacuating the interior portion to thereby create a vacuum in the interior portion;

heating the green body to render the green body container plastic, a temperature of the porous interior portion being raised to an appropriate compacting temperature;

applying external pressure to the green body, the external pressure collapsing the green body until the interior portion is fully densified, whereby a solid glass optical blank is formed; and

cooling the densified solid glass optical blank.

25. A method for forming an optical blank, the method comprising:

providing a fused silica tube having an interior portion;

filling the fused silica tube with glass particles;

evacuating the interior portion to thereby create a vacuum in the interior portion; and

heating the fused silica tube to thereby densify the fused silica tube into a solid glass body.

26. The method of claim 25, wherein the glass particles include glass soot.

27. The method of claim 25, wherein the glass particles include glass cullet.